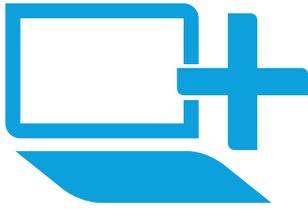


Solution guide

# Why choose a mobile workstation?

When it comes to powerful computing on the go, mobile workstations are in a class of their own, providing a spectrum of performance, reliability, and expandability that extends well beyond the capabilities of standard mobile computers.





HP ZBook Mobile Workstations are designed for the demands of users who work with professional and technical applications, large and complex datasets, or intricate 3D models.

While HP EliteBook 800 series Notebooks can provide you with excellent value, HP ZBook Mobile Workstations deliver superb performance, outstanding reliability, and wide-ranging scalability as well as a range of screen sizes to fit various needs.

### HP EliteBook 800 series Notebook

### HP ZBook Mobile Workstations\*

#### Form factors

- 14.0-inch diagonal
- 15.6-inch diagonal

#### Form factors

- 14.0-inch diagonal
- 15.6-inch diagonal
- 17.0-inch diagonal

#### Operating systems<sup>1</sup>

- Windows 10 Pro 64
- Windows 10 Home 64
- FreeDOS 2.0

#### Operating systems<sup>1</sup>

- Windows 10 Pro 64
- Windows 10 Home 64
- FreeDOS 2.0

#### Performance

- Intel® Core™ i3, i5, i7 processors<sup>2</sup>
- Up to 32 GB non-ECC memory
- Up to 2 TB storage<sup>4</sup>

#### Performance

- Intel® Core™ i5, i7 processors<sup>2</sup>
- Intel® Xeon® quad-core processor<sup>2</sup>
- Up to 64 GB ECC memory<sup>3</sup>
- Up to 4 TB storage<sup>4</sup>
- Two USB Type-C™ (supporting Thunderbolt™ 3, DisplayPort™ 1.2, USB 3.1)
- Up to dual HP Z Turbo Drive G2 (M.2 NVMe PCIe SSD)<sup>5</sup> for accelerated storage performance
- Support for up to UHD display options
- HP DreamColor panel option

#### Reliability

- MIL-STD-810G testing<sup>6</sup>
- HP DuraCase
- HP DuraKeys
- Precision stamped full magnesium alloy chassis
- Chemically strengthened glass touchpad
- Cast titanium alloy display latch

#### Reliability

- All the reliability features in the HP EliteBook 800 series Notebook plus:
- Additional MIL-STD-810G testing<sup>6</sup>
  - Rigorous ISV testing and certifications
  - Productivity-boosting software tools such as HP Performance Advisor and HP Remote Graphics Software<sup>7</sup> preloaded

#### Graphics

- Intel® integrated graphics
- AMD Radeon™ graphics

#### Graphics

- ISV certified workstation professional graphics
- Intel® integrated graphics
- AMD FirePro™ and Radeon™ Pro
- NVIDIA® Quadro® including HP VR Ready options

#### Warranty

1/1/0 or 3/3/0 support; on site service is extra

#### Warranty

3/3/3 or 3/3/0 support\*\*

\* Many workstation technologies are selectable options. Specifications can vary by workstation platform.

\*\* Varies by region.



HP ZBooks help you spend less time waiting and more time creating with industry-leading processing, graphics, and innovative technologies.

## Take performance to new extremes

Leave the performance bottleneck behind with HP ZBooks. With industry-leading processing, storage, graphics, and system management components HP has engineered a total system approach to define new levels of overall performance.

### Intel Processor Technology

High-performance Intel® Xeon® processors are validated and tested by Intel and HP for demanding workstation applications. Besides supporting greater reliability with ECC memory, Intel® Xeon® processors offer up to 29% performance gains over equivalent Intel® Core™ processors on the HP Entry Workstations.<sup>7</sup>

### Storage solutions to meet your needs

High-performance storage solutions are required for demanding workflows. HP ZBooks offer high reliability and performance with storage capacities up to 4 TB<sup>4</sup>. With 2.5" and M.2 storage bay options, you can choose from SATA HDD, SATA SSD, and NVMe PCIe SSD options.

The HP Z Turbo Drive G2 is a remarkably affordable and innovative NVMe PCIe-based SSD storage solution. It revolutionises how your HP ZBook handles large files—significantly reducing boot up, calculation and graphics response times (even with 4K video). To learn more, see [hp.com/go/zturbo](http://hp.com/go/zturbo).

### Leading-edge professional graphics

Extensive HP testing over a wide range of graphics cards, simulating real-world customer workloads and stress tests that far exceed typical usage, translate into higher quality drivers that customers trust. Strong relationships with NVIDIA® and AMD help us quickly resolve any issues. That's how we give your HP ZBook graphics solutions that feature optimised thermal and power design, wide-ranging application certification, are designated HP VR Ready, and carry a three-year limited warranty.

### HP Performance Advisor

Get the most out of your HP ZBook from day one. With HP Performance Advisor pre-installed on every HP ZBook, you can spend more time working, processing and designing and less time troubleshooting IT. This exclusive HP software wizard helps configure, customise and optimise your system for each new application and driver you install.

To learn more, see [hp.com/go/performanceadvisor](http://hp.com/go/performanceadvisor).

### HP Remote Graphics Software<sup>8</sup>

Work like you're local with transfer speeds up to 60 fps for your most demanding applications. HP Remote Graphics Software (HP RGS)<sup>8</sup> takes the mobility of your workstation to a whole new level. Now you can leave your HP ZBook docked at the office and connect from home while still getting that high end workstation performance you need and expect. Not only can you view the session, but you can collaborate with multiple remote users by streaming your local workstation screen across the cloud to your team's individual devices or pulling multiple remote feeds to a single PC. Every HP Z Workstation includes an HP RGS sender license ready to activate and an HP RGS receiver can be downloaded for any PC, Mac®, MacBook®, Windows tablet or thin client. And with advanced touch recognition features on HP RGS 7 you can easily do real work with workstation-class applications on an HP ZBook or tablet. To learn more, see [hp.com/go/rgs](http://hp.com/go/rgs).

### Thunderbolt™ 3

Connect to a multitude of devices through a single port with the versatile Thunderbolt™ 3. You can connect via Thunderbolt, DisplayPort™ 1.2, USB 3.1, and PCIe. Power two 4K displays @ 60 Hz, daisy chain up to 6 devices, and transfer data at speeds up to 40 Gb/s—double that of previous generation Thunderbolt. The possibilities are endless. HP ZBook Studio, 15, and 17 offer dual Thunderbolt™ 3 ports via USB Type-C™ connectors.

### Performance on display

HP ZBooks come with a variety of display choices from FHD up to UHD/4K resolutions. UHD/4K panels offer extremely high resolution (3840 x 2160) for maximum screen real estate and vibrant, clear pictures. All HP ZBook Mobile Workstations also offer a touch display option.

### HP DreamColor Technology

Take colour accuracy to the next level and achieve maximum impact with the HP DreamColor Display. Designed by colour professionals and digital content creators, HP DreamColor is the power tool they use to produce trusted results. Featuring a palette of over one billion colours, you'll get precise colour accuracy and predictable colour across your entire digital workflow. HP DreamColor is offered as an option on the HP ZBook Studio, 15, and 17.



Ultimately, our intense focus on reliability gives you greater peace of mind when running professional applications on the HP ZBook. You know that you have a system that is designed, tested, and proven for the work you do.

120,000  
hours of testing

## Mission-critical reliability

We understand your work is critical and system down time or failure is not an option. HP ZBooks are designed and tested to comprehensively address reliability in all its forms, so you can rest assured your workstation will keep up in the most demanding environments.

### Business-rugged design

HP ZBooks are designed to stand up to the rigours of users who are constantly on the go. HP uses third party vendors to test the HP ZBooks to military standards for drop, vibration, dust, temperature, and altitude.<sup>6</sup>

### Tested beyond industry standards

HP knows you challenge your workstations every day, so HP does too. HP Z Workstation engineers conduct 120,000 hours of rigorous testing to ensure world-class reliability. In brutal three-axis testing—where frequency, voltage, and temperature are varied—our engineers push the limits of processors, memory, and other system parts. This testing uses proprietary tools and techniques, and stresses components in ways that help detect potential design or component weaknesses that would otherwise go unnoticed. In some cases, rigorous qualification enables us to find issues that have been previously overlooked by our component vendors. We have strong relationships and influence with these vendors, which enable us to obtain and integrate improved components into our systems, many of which are unique to HP Z Workstations.

### ECC memory for data integrity

Memory errors can happen anywhere, anytime—with consequences as disastrous as a system crash in the middle of a critical operation.

Error Correction Code (ECC) memory detects and corrects soft errors in the memory system on the fly, preserving the integrity of your data. HP offers ECC memory on our Intel® Xeon® based mobile workstations so your mission-critical applications can run smoothly with minimised memory errors.

## The world's most secure and manageable mobile workstations<sup>9</sup>

HP offers a variety of scalable hardware, software, and BIOS-based security features to help you defend your organisation against viruses and other threats. These integrated security features safeguard what matters to you the most—your data, device and identity.

- An optional fingerprint reader and integrated Smart Card Reader help keep your identity secure.
- HP SureStart Gen 3<sup>10</sup> goes to work at startup—making sure your HP ZBook is protected from malicious or unanticipated malware attacks. It's designed to automatically restore the BIOS within 30 seconds if it is ever attacked or corrupted.
- Secure Erase enables you to permanently destroy data on your hard drive in preparation for your system disposal or redeployment.

### Engineered BIOS

HP BIOS helps hardware compatibility and increases workstation reliability by reducing power consumption through preset sleep states, adjustable fan speeds that maximise operating efficiency, and power management features.

### Independent Software Vendor (ISV) certification

HP supports an extensive list of application partners and works closely with many software vendors to ensure that these applications work smoothly and flawlessly on HP ZBooks in all possible configurations. HP also provides a test suite to graphics vendors, to help increase the reliability and stability of industry-standard graphics products. [Learn more about how HP's relationships power you.](#)

# 35+

years in the industry

## Why choose an HP ZBook?

HP Z Workstations have been on the market for over 35 years. Designed from the inside out to fulfill the needs of our customers, HP Z Workstations deliver high performance and reliability with the latest innovation and industry-leading technologies.

### HP ZBook 14u Designed to move

Meet our thin and light HP ZBook 14u. This Ultrabook™<sup>11</sup> workstation delivers an extraordinary level of power and graphics capability in a remarkably compact design. Now you can take workstation-class power anywhere you go.

### HP ZBook 15u Thin. Powerful. Affordable.

Enjoy workstation performance in a low cost, compact package. The HP ZBook 15u with its 15.6" diagonal display is the perfect combination of mobility and cost.

### HP ZBook Studio Stunning design

Built for creative visionaries, the HP ZBook Studio offers desktop workstation power in a sleek, light, stunning mobile design.

### HP ZBook 15 Portable Powerhouse

Made for the most demanding workloads, the HP ZBook 15 is used by NASA to help push the boundaries of science and discovery on the International Space Station. Imagine what it could do for you.

### HP ZBook 17 HP's ultimate in mobile performance

We built desktop workstation power, performance and expandability into a device designed for the road. Made for mobile creative, design, and VR professionals with the most demanding projects, where compromise is simply not an option.

## Memory, storage and graphics that meet your needs

	Available operating systems <sup>1</sup>	Maximum memory	Maximum storage <sup>4</sup>	Maximum graphics
<b>HP ZBook 14u G4</b>	Windows 10 Professional Windows 10 Home 64 FreeDOS 2.0	32 GB	2 TB	AMD FirePro™ W4190M (2 GB GDDR5 dedicated)
<b>HP ZBook 15u G4</b>	Windows 10 Professional Windows 10 Home 64 FreeDOS 2.0	32 GB	2 TB	AMD FirePro™ W4190M (2 GB GDDR5 dedicated)
<b>HP ZBook Studio G4</b>	Windows 10 Professional Windows 10 Home 64 FreeDOS 2.0	32 GB	2 TB	NVIDIA® Quadro® M1200M (4 GB GDDR5 dedicated)
<b>HP ZBook 15 G4</b>	Windows 10 Professional Windows 10 Home 64 FreeDOS 2.0	64 GB	3 TB	AMD Radeon™ Pro WX 4150 (4 GB GDDR5 dedicated); NVIDIA® Quadro® M2200 (4 GB GDDR5 dedicated)
<b>HP ZBook 17 G4</b>	Windows 10 Professional Windows 10 Home 64 FreeDOS 2.0	64 GB	4 TB	AMD Radeon™ Pro WX 4170 (4 GB GDDR5 dedicated); <b>HP VR Ready:</b> NVIDIA® Quadro® P5000 (16 GB GDDR5 dedicated)



<sup>1</sup> Not all features are available in all editions or versions of Windows. Systems may require upgraded and/or separately purchased hardware, drivers, software or BIOS update to take full advantage of Windows functionality. Windows 10 is automatically updated, which is always enabled. ISP fees may apply and additional requirements may apply over time for updates. See [microsoft.com](http://microsoft.com).

<sup>2</sup> In accordance with Microsoft's support policy, HP does not support the Windows 8 or Windows 7 operating system on products configured with Intel® and AMD 7th generation and forward processors or provide any Windows 8 or Windows 7 drivers on <http://www.support.hp.com>.

<sup>3</sup> Intel® Xeon® E3 can support either ECC or non-ECC memory. Intel® Core™ i3/i5/i7 processors only support non-ECC memory.

<sup>4</sup> For storage drives GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 30 GB (for Windows 10) is reserved for system recovery software.

<sup>5</sup> Sold separately or as an optional feature.

<sup>6</sup> MIL STD 810G testing is not intended to demonstrate fitness for U.S. Department of Defense contract requirements or for military use. Test results are not a guarantee of future performance under these test conditions. Damage under the MIL STD test conditions or any accidental damage requires an optional HP Accidental Damage Protection Care.

<sup>7</sup> Results based on the SPECapc benchmarks for DS SolidWorks 2015 CPU Composite and the Cinebench CPU benchmark test; comparing an HP Z240 Tower Workstation with an Intel® Core™ i5-6600 processor to an HP Z240 Tower Workstation with an Intel® Xeon® E3-1240 v5 Processor. All other system configurations were selected to be as equal as possible.

<sup>8</sup> HP RGS requires a Windows, Linux®, or Mac® OS X 10.10 and newer operating system and network access.

<sup>9</sup> Based on HP's unique and comprehensive security capabilities at no additional cost among mobile workstation vendors as of Jan. 2017 on HP Mobile Workstations with 7th Gen Intel® processors.

<sup>10</sup> HP Sure Start Gen3 is available on HP EliteBook and HP ZBook products equipped with Intel® 7th generation processors.

For more information visit  
[hp.com/go/zbooks](http://hp.com/go/zbooks)



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